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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/591,969 | 09/07/2006 | Mustafa Acar | NL04 0284 US1 | 4925 |
| 65913 | 7550 | 11/13/2008 | EXAMINER | |
| NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131 | | | COLE, BRANDON S | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2816 | |
| | | | NOTIFICATION DATE | DELIVERY MODE |
| | | | 11/13/2008 | ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary

Application No.

10/591,969

Applicant(s)

ACAR ET AL.

Examiner

BRANDON S. COLE

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on July 3rd 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 7, 8 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 is/are allowed.
- 6) ☒ Claim(s) 8 is/are rejected.
- 7) ☒ Claim(s) 7 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on September 7th 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is made FINAL to the amendments filed on 7/03/2008.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, as to claim 13, the gates of the fifth transistor (M5 of figures 2a and 2b) and the sixth transistor (M6 of figures 2a and 2b) receiving a signal generated by the first latch must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Figure 2b fails to label the output terminals O3 and O4.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 7 and 13 objected to because of the following informalities:

In Claim 7, lines 3-4, "and between the drain of the fifth transistor and drain of the sixth transistor, respectively" should be changed to -- wherein the negative resistance comprises of a fifth and sixth transistor --.

In claim 13, lines 9-10, "receiving a signal generated by the first latch" should be changed to -- are connected to the output of the second latch. --.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (US 6,166,571) in view of Yin et al (US 6,982,583).

As to claim 8, Wang figure 2 shows a frequency divider comprising, a first latch (Q10,Q20, Q50, Q50', Q60, Q60', Q100) comprising a clock input (CLK') for receiving a clock signal, and the second latch (Q30,Q40, Q70, Q70', Q80, Q80', Q200) being crossed-coupled to the first latch; wherein the second latch comprises a differential pair of transistors including a fifth transistor (Q70') and a sixth transistor (Q80') each transistor having a drain, a source and a gate, a drain of the fifth transistor and the drain of the sixth transistor being coupled to a supply voltage (Vdd), a source of the fifth transistor and a source of the sixth transistor being coupled to a common

potential, that the drain of fifth transistor and the drain of the sixth transistor being coupled to a supply voltage, and the gates of the fifth transistor and sixth transistor receiving a signal generated (A and A') by the first latch.

Wang fails to show a second latch wherein the drain of fifth transistor and the drain of the sixth transistor being coupled to a supply voltage via respective resistors, and that the latch circuit configured as a low-pass filter,

However, Yin et al shows in figure 8 a first and a second latch wherein the drain of fifth transistor and the drain of the sixth transistor being coupled to a supply voltage via respective resistors (RL1A and RL2A). Yin et al teaches in column 6, lines 60 – 67 that figure is a master-slave flip flop comprising of a first and second latch.

It would have been obvious for someone having ordinary skill in the art, at the time of the invention, to add a resistor between Wang's drains of the fifth transistor and sixth transistor of the second latch for the purpose of enhancing the performance of the circuit.

The latch circuit being configured as a low-pass filter will be an inherent operational characteristic of the latches taught by Yin et al.

Response to Arguments

7. Applicant's arguments with respect to claim 8, filed on 7/03/2008, has been fully considered but is not persuasive. Wang in view of Yin clearly shows the frequency

divider as claimed. The applicant never made changes to claim 8 after the non-final office action, sent out on 4/03/2008, that would make the claim allowable. Therefore, the rejection stands.

Allowable Subject Matter

8. Claim 1 is allowable over the prior art of record because the art of record does not disclose nor render obvious a the control signal being a DC signal, in combination with the rest of the claimed limitations.

9. Claims 7 and 13 would be allowable after amendments are made to fix the objections.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRANDON S. COLE whose telephone number is (571)270-5075. The examiner can normally be reached on Mon - Fri 7:30-5:00 EST (Alternate Friday's Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on (571) 272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Long Nguyen/
Primary Examiner, Art Unit 2816

/Brandon S Cole/
Examiner, Art Unit 2816